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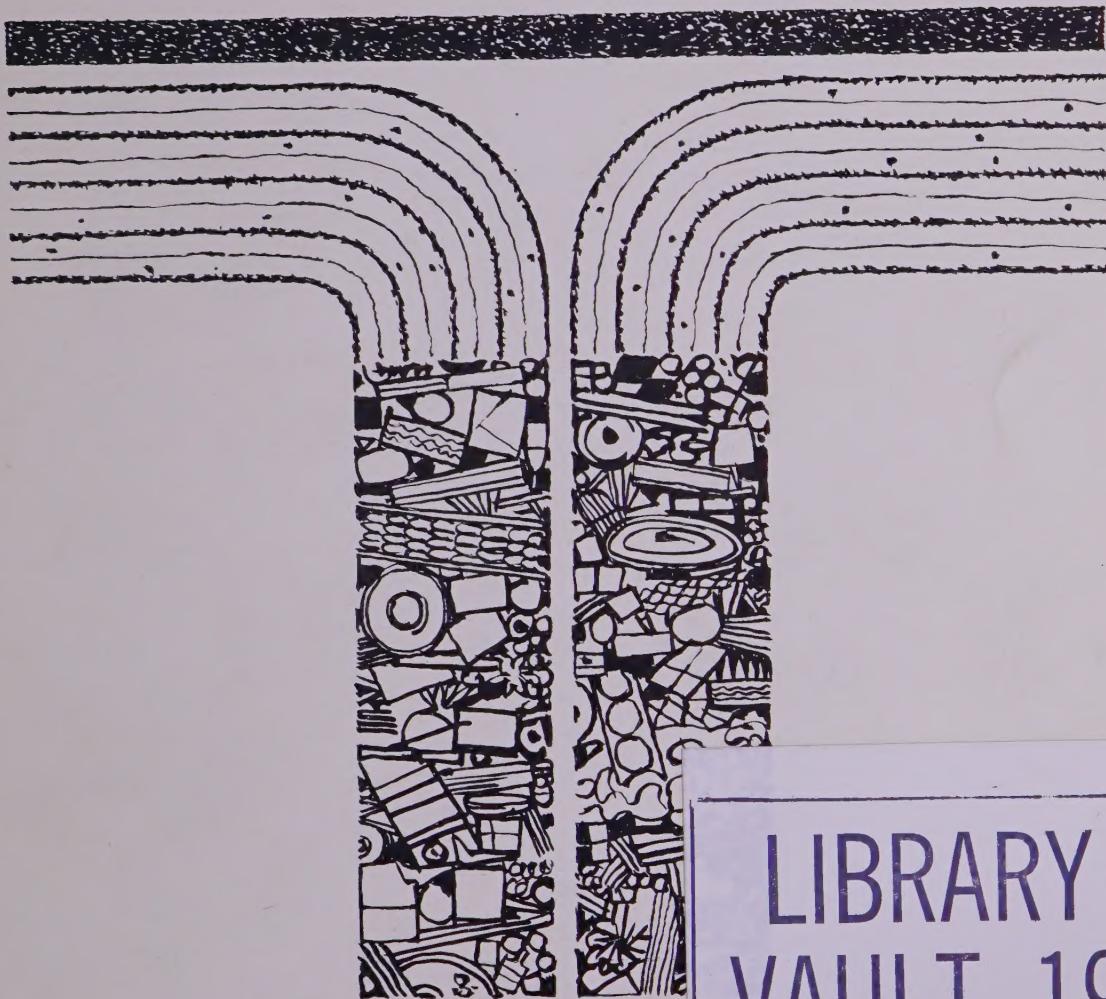
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Modified Landfills.



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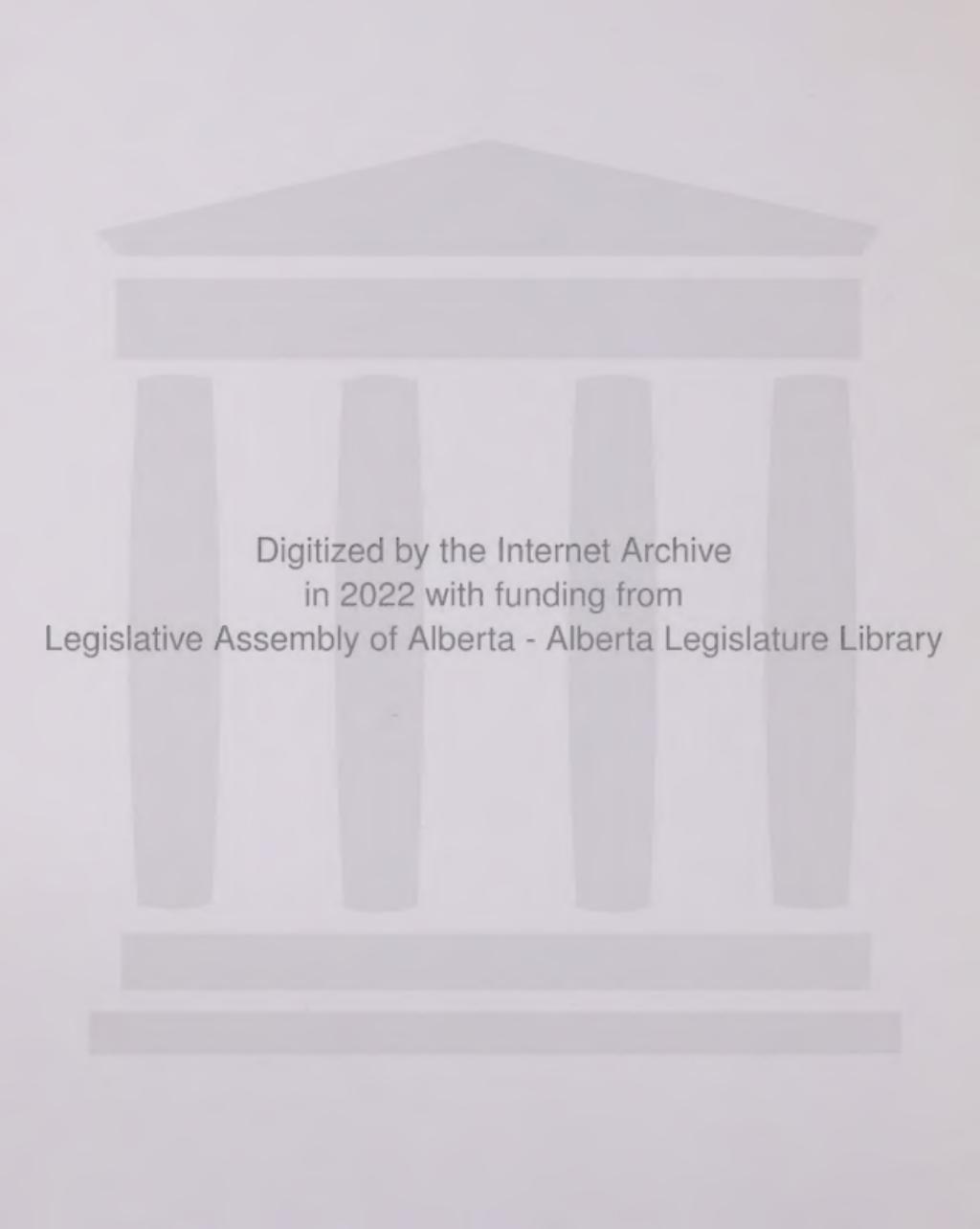
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# MODIFIED LANDFILLS



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ALBERTA DEPARTMENT OF HEALTH



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## FOREWORD

In 1967 an extensive review of solid waste disposal practices was carried out by an Alberta Provincial-Municipal Advisory Committee established by the Minister of Health, the Honourable Dr. J. Donovan Ross. Based on the recommendations of this committee, regulations for the control of refuse disposal systems were published.

The purpose of this pamphlet is to give explanatory details of the Modified Landfill procedure which is the required minimal means of refuse disposal where a population of less than 5,000 is being served. A refuse disposal system must be provided by each Municipality; however, joint use by urban and rural municipalities is often satisfactory.

The Regulations for the Control of Refuse Disposal Systems provide that a modified landfill may not be established, constructed or operated unless a permit has been obtained from the Provincial Board of Health.

Existing modified landfills (as of December 31, 1967) are not required to obtain a permit; however, such modified landfills must comply with all other requirements of the regulations by January 1, 1971.

The regulations require that certain information must be submitted to the Provincial Board of Health with a request for a permit. To assist municipalities and others which may be seeking permits, this information is listed at the end of this pamphlet. Persons responsible for the submission of requests for permits, should, of course, follow the requirements of the regulations which are in no way set aside or superseded by the list.



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## PRELIMINARY REQUIREMENTS

If the site of an existing open dump is to be used, the initial operation should be to consolidate the refuse, place it in a ditch and cover it with earth. The following sketches illustrate the procedure.

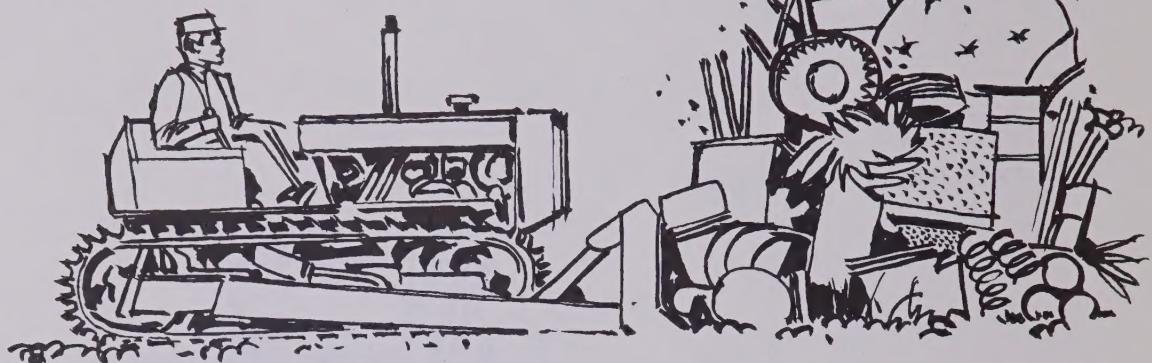
EXISTING REFUSE DUMP



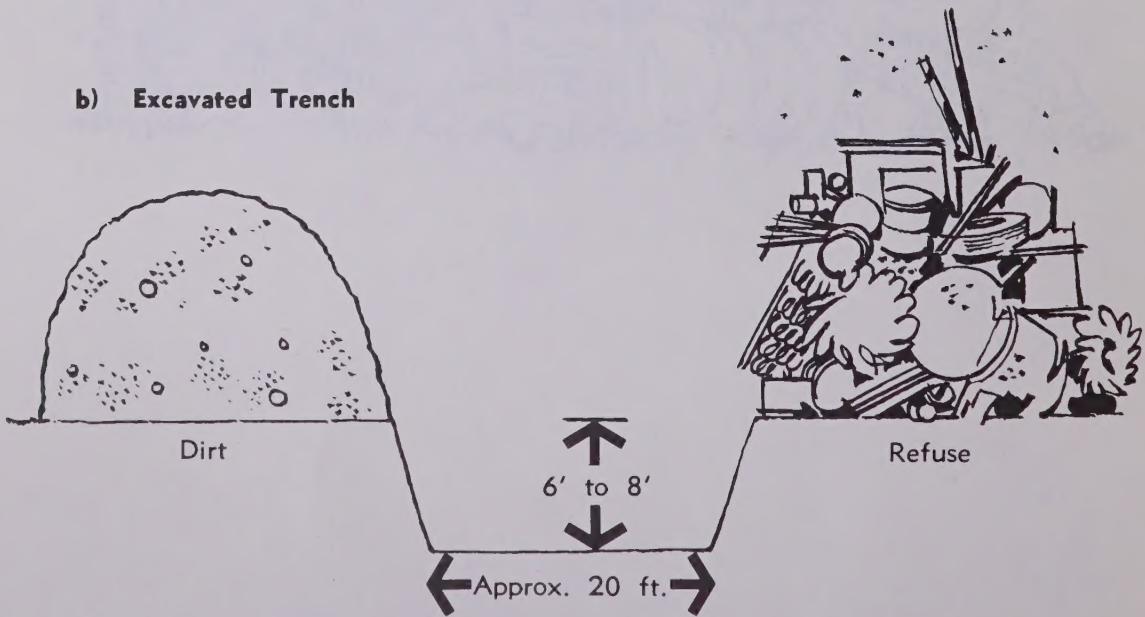
Rent heavy equipment or make arrangements with an adjoining municipality and have their equipment and men do the job. Large farm tractors fitted with a blade or bucket may also be used.

## Converting to a Modified Landfill

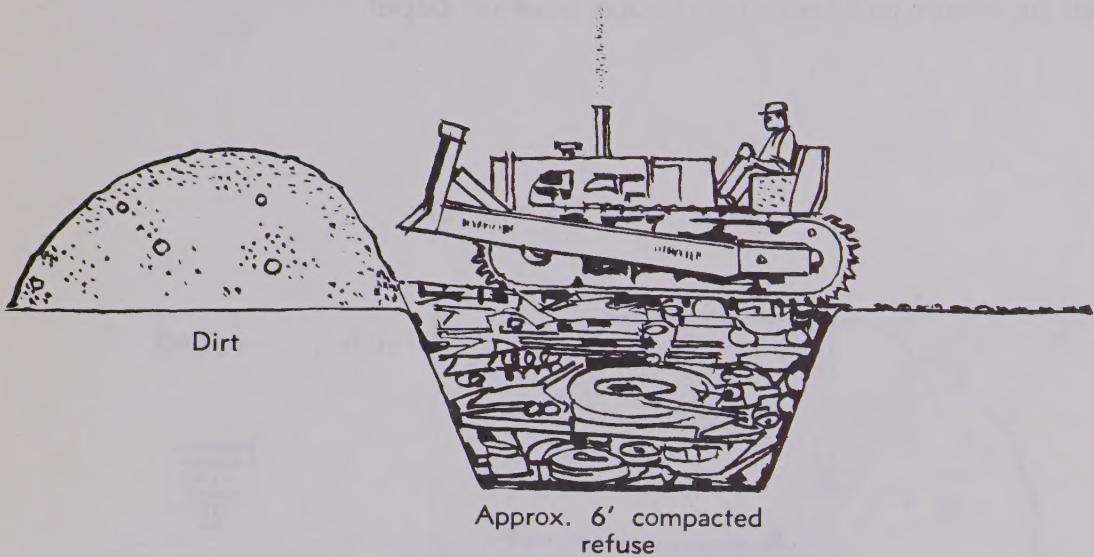
### a) Push the Refuse Back in a Windrow



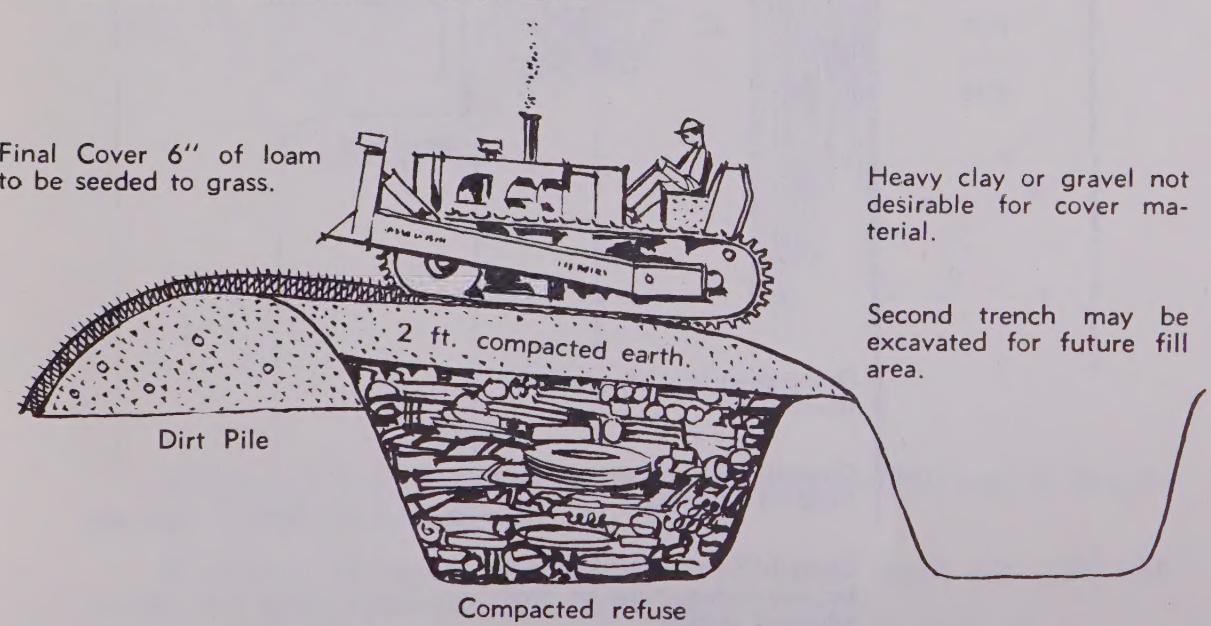
### b) Excavated Trench



c) Push refuse into the trench and compact to reduce volume.



d) Cover refuse with 2 feet of earth.



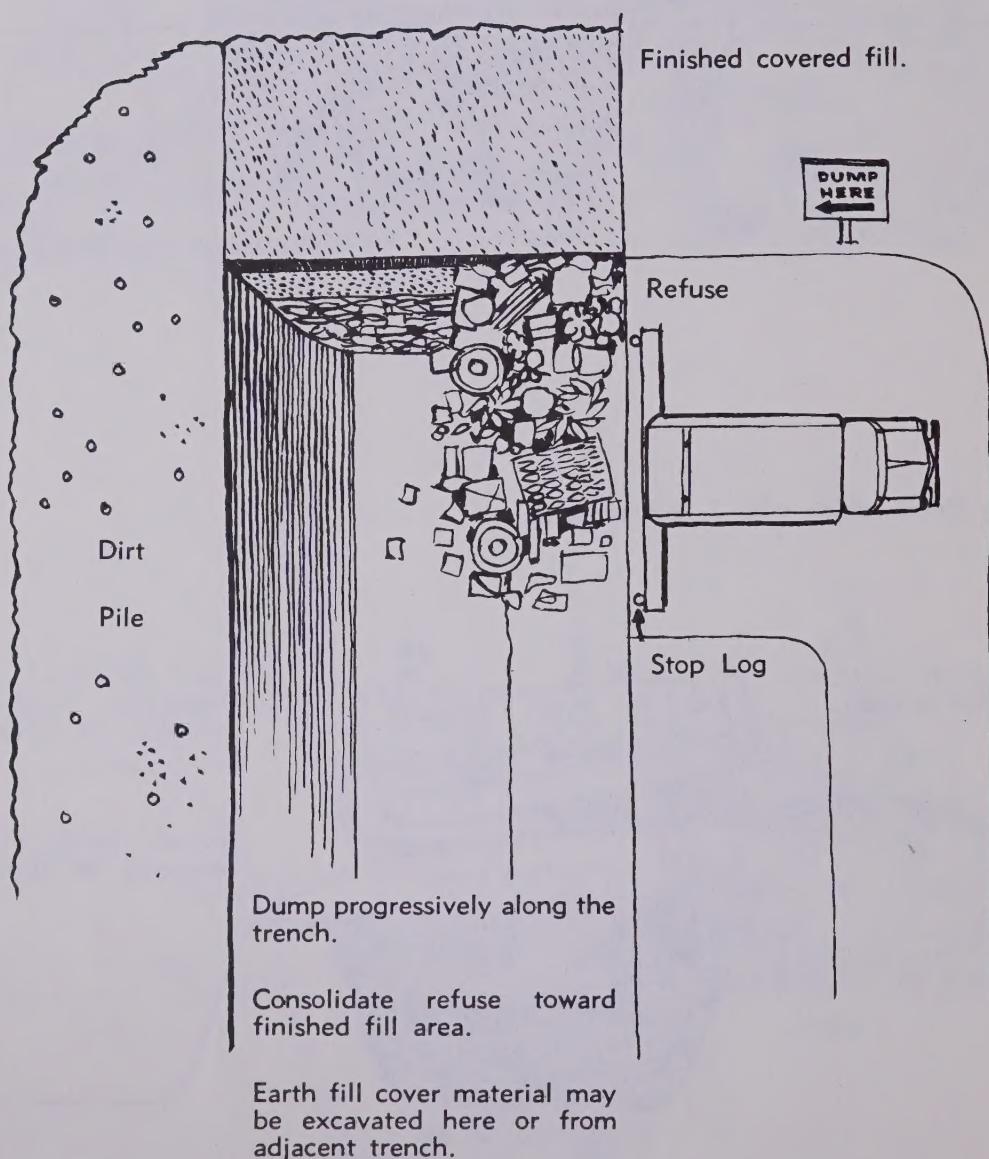
NOTE: Cover mounded to aid surface run-off.

## Continuing a Modified Landfill

You are now in the modified landfill business, the most effective and economical means of disposing of refuse in a neat manner which eliminates health hazards and complaints.

From now on your refuse may be dumped into a trench where it will be easier to cover and reduce blowing paper.

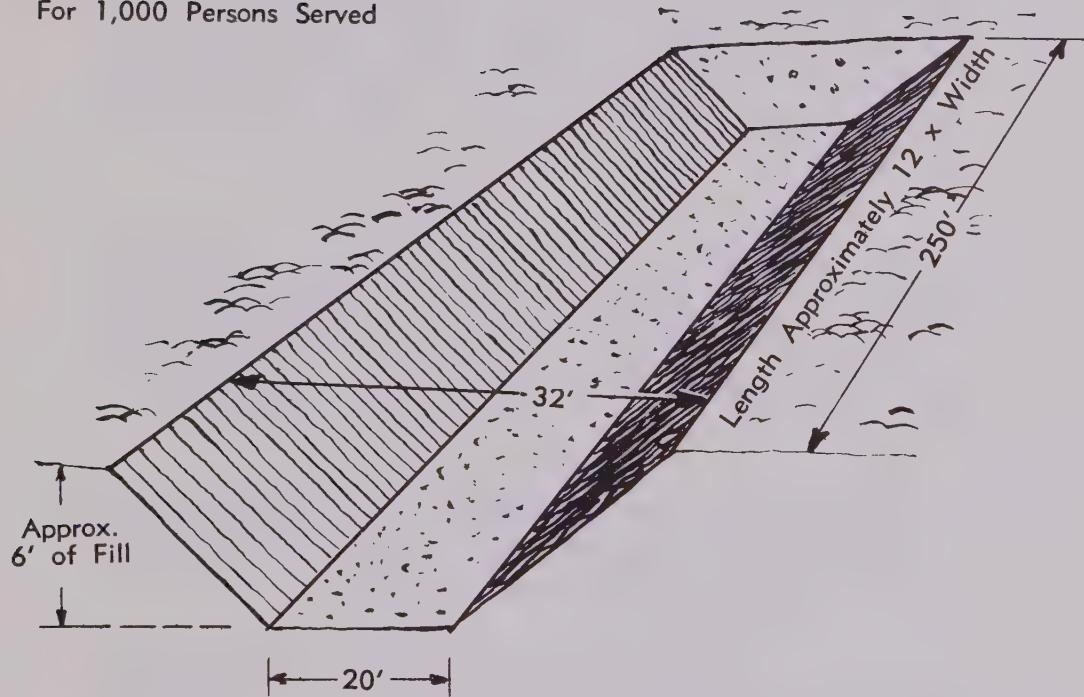
TOP VIEW OF TRENCH



## Size of Trench

Considering that good compaction will not be obtained because heavy equipment is not available at the site continually, initial trenches should be of adequate size.

For 1,000 Persons Served



A trench 6 feet deep, 20 feet wide will require 250 feet of length per year/1,000 people served.

A volume of about one and one half cubic yards per year per person is a good estimate of volume requirements.

## OPERATING A MODIFIED LANDFILL

The following suggestions are offered.

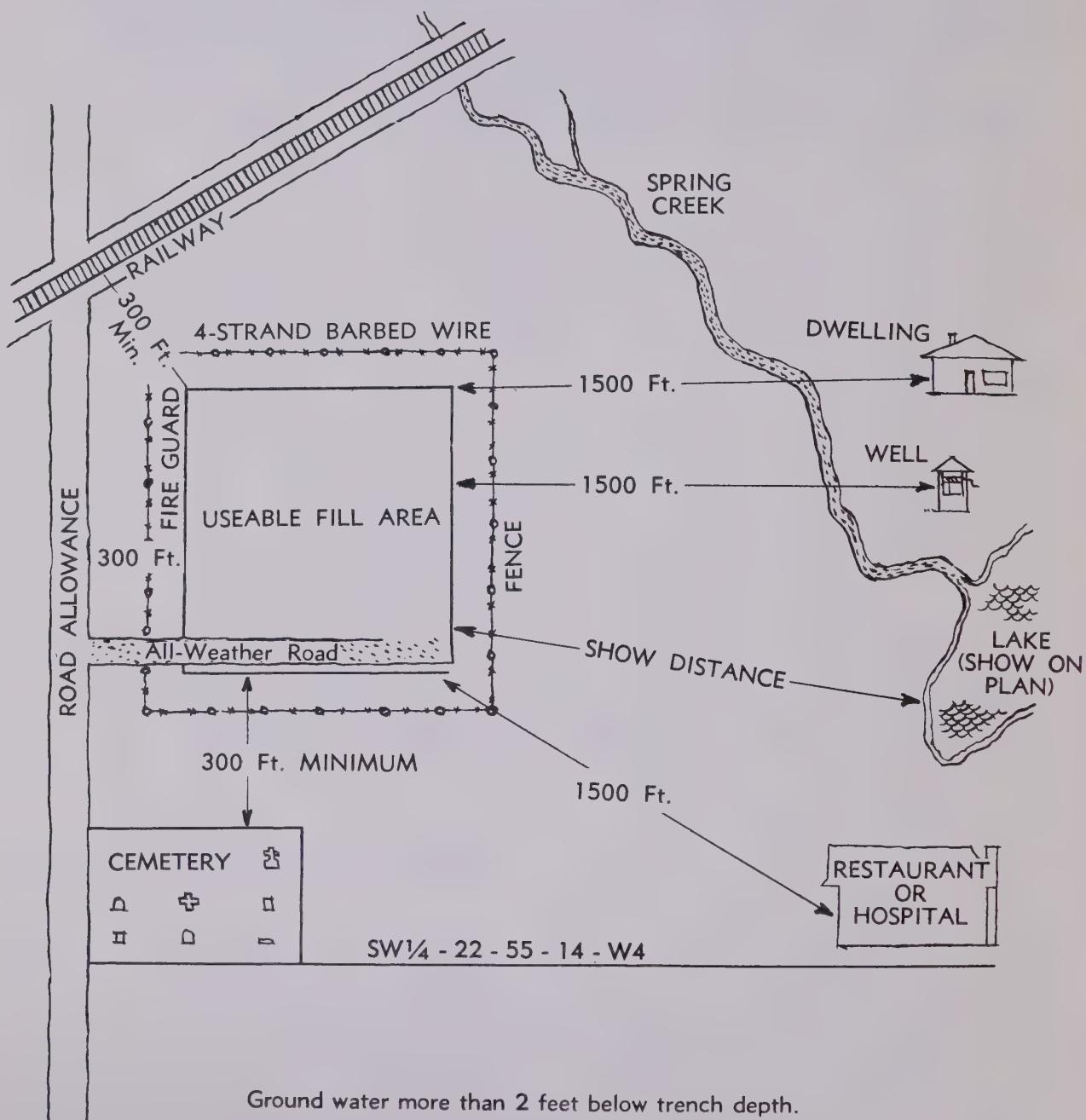
1. Post some signs welcoming users to use the area so long as they "dump over here" 
2. Set aside a corner for large objects — car bodies, etc., which cannot be dumped directly into the trench.
3. Some refuse may be burned in your modified landfill disposal area. Be sure there is a good fire guard. Burn on days when there are light winds from a direction which will minimize complaints. Burning Christmas trees and wood waste is fine. Old tires create a lot of smoke.
4. Our winters take care of flies, mosquitoes and odors, but you will have to plan for an April clean-up, compaction and cover operation. Further clean-ups and cover may be necessary during the summer to prevent offensive conditions.
5. One of the most common causes of complaints is the refuse which may be seen on the road to the disposal area. Occasional clean-ups are suggested.
6. Insect-rodent control may be required if so directed by the local health authority.
7. Adequate control must be maintained to prevent refuse from blowing onto adjacent property and to ensure that the refuse is placed in the appropriate trench or working area. The whole area shall be cleaned up and the required cover placed at least once a year. Spring clean-up and cover is recommended.
8. Blade in cracks or scarify the earth cover until permanent cover has been established.
9. The area of the fill operation must be grassed over annually and normal weed control exercised.

## NEW MODIFIED LANDFILL SITES

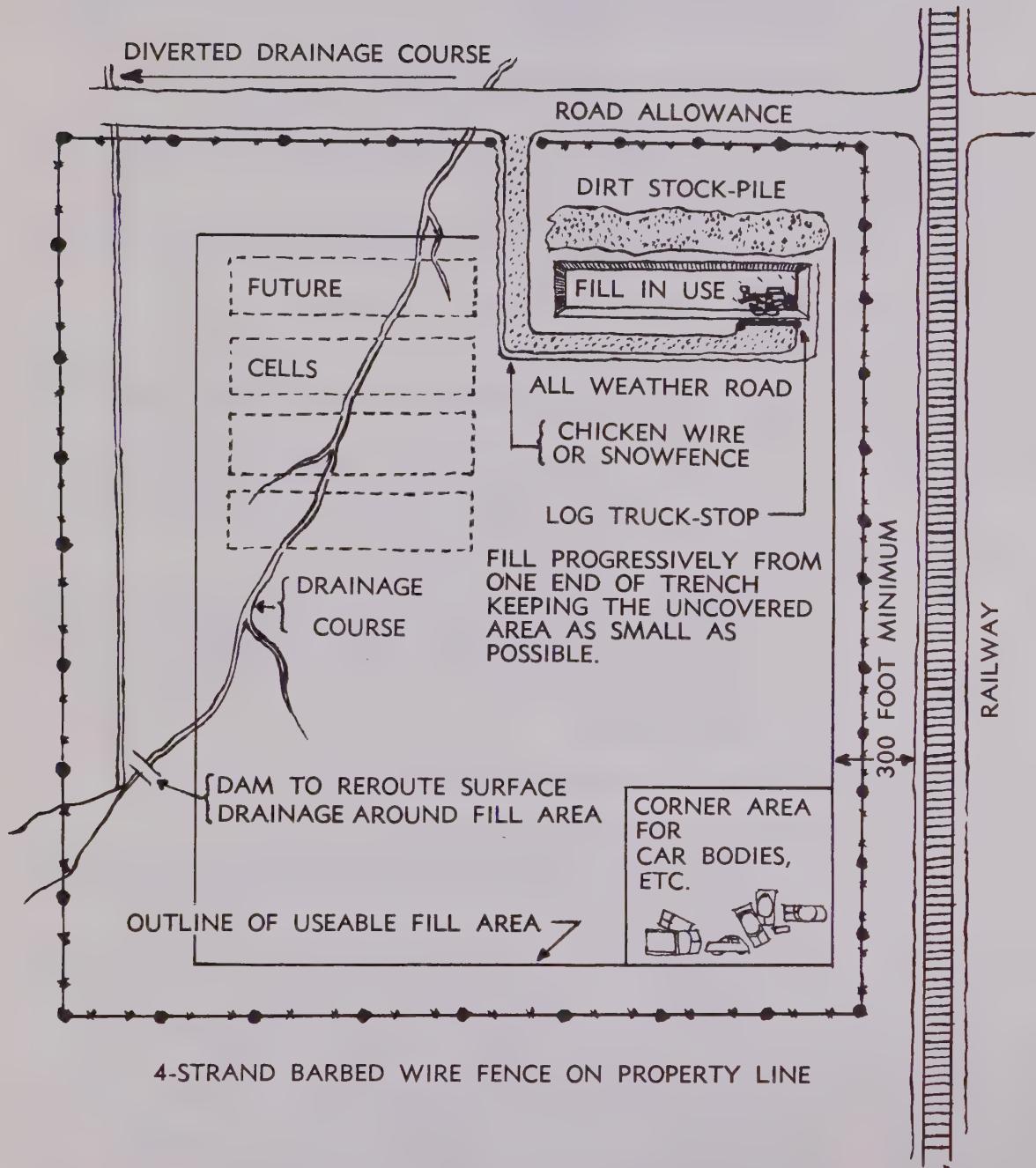
If a new site is being chosen, soil type, proximity to dwellings, good all-weather access, and adequate drainage must be kept in mind. The local Health Authority can render valuable aid in assessing a possible site. The following sketches and notes point out several site requirements. Most of the information required in the "Application for Permit" (see end of pamphlet) can be provided on a similar sketch.

Note that a trench type operation **must** be used. Dumping off the edges of natural ravines is **not** permitted.

AREA VIEW OF PROPOSED MODIFIED LANDFILL  
SHOWING MINIMUM DISTANCES



## TYPICAL MODIFIED LANDFILL



## **REQUEST FOR PERMIT — FOR THE ESTABLISHMENT OF A MODIFIED LANDFILL**

Request for permit should be addressed to:

**The Provincial Board of Health  
Administration Building  
EDMONTON 6, Alberta**

### **ATTENTION: Chief Public Health Inspector**

The following information is to be submitted with request for permit (see drawings on pages 8 and 9).

1. The name and address of the municipality (or other body) requesting permit.
2. The quarter section on which it is proposed to locate.
3. The area of proposed site.
4. Where required by the Provincial Board of Health under the provisions of Section 12-4-8:  
A report on the response to advertising and a statement of consent or agreement from the municipality in which the modified landfill is to be located.
5. Information on land tenure as follows:
  - a. Duplicate Certificate of Title indicating title to the site is held by the municipality or other body which is requesting the permit, (other positive evidence may be accepted) or
  - b. Copy of lease.
6. A statement that there is no cemetery within 300 feet.
7. A plan showing the following items:
  - a. The location and boundaries of the proposed site in relation to the boundaries of the quarter section.
  - b. The general slope of the ground in the vicinity.
  - c. The location of all sources of water supply for domestic purposes within 1,500 feet.
  - d. The location of any rivers, lakes, streams or other natural bodies of water within 1,500 feet.
  - e. The location of any irrigation ditch or other irrigation works within 1,500 feet.
  - f. The location of any dwellings within 1,500 feet.
  - g. The location of any roads within 300 feet.
8. A plan(s) or statement indicating the method to be followed in operating the modified landfill.
9. If the distances specified in (7) cannot be met, full details on the reasons for requesting relaxation of these distances must be provided.

### **Request for Approval of Preliminary Proposal**

Persons, municipalities or corporations who require permits may desire to submit a preliminary outline of the proposal for consideration of the Provincial Board of Health. The information supplied to support a request for preliminary approval need not be as detailed or complete as that required for the final permit. The plans and supporting information should show the information required by 1, 2, 3, 6, 7 and 9.

# NOTES



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